

## Complete Summary

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### **GUIDELINE TITLE**

Preventing pressure ulcers and skin tears. In: Evidence-based geriatric nursing protocols for best practice.

### **BIBLIOGRAPHIC SOURCE(S)**

Ayello EA, Sibbald RG. Preventing pressure ulcers and skin tears. In: Capezuti E, Zwicker D, Mezey M, Fulmer T, editor(s). Evidence-based geriatric nursing protocols for best practice. 3rd ed. New York (NY): Springer Publishing Company; 2008 Jan. p. 403-29. [91 references]

### **GUIDELINE STATUS**

This is the current release of the guideline.

This guideline updates a previous version: Ayello EA. Preventing pressure ulcers and skin tears. In: Mezey M, Fulmer T, Abraham I, Zwicker DA, editor(s). Geriatric nursing protocols for best practice. 2nd ed. New York (NY): Springer Publishing Company, Inc.; 2003. p. 165-84.

## COMPLETE SUMMARY CONTENT

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## SCOPE

### **DISEASE/CONDITION(S)**

- Pressure ulcers
- Skin tears

### **GUIDELINE CATEGORY**

Management  
 Prevention

Risk Assessment  
Treatment

## **CLINICAL SPECIALTY**

Geriatrics  
Nursing  
Physical Medicine and Rehabilitation

## **INTENDED USERS**

Advanced Practice Nurses  
Allied Health Personnel  
Health Care Providers  
Hospitals  
Nurses  
Physician Assistants  
Physicians

## **GUIDELINE OBJECTIVE(S)**

To provide a standard of practice protocol for:

- Prevention of pressure ulcers and early recognition of pressure ulcer development and skin changes
- Prevention of skin tears in elderly clients
- Identification of clients at risk for skin tears
- Fostering healing of skin tears

## **TARGET POPULATION**

- Older adults with identified intrinsic and/or extrinsic risk factors for pressure ulcers, including:
  - Immobility as seen in bedbound or chair-bound patients and those unable to change positions
  - Undernutrition or malnutrition
  - Incontinence
  - Friable skin
  - Impaired cognitive ability
  - Braden scale risk score
- Older adults at risk for skin tears

## **INTERVENTIONS AND PRACTICES CONSIDERED**

### **Assessment of Pressure Ulcers**

1. Risk assessment
  - Braden Risk Score
2. Stage I pressure ulcers in patients with darkly pigmented skin
3. Prevention strategies
  - Braden Risk Score

## **Management of Pressure Ulcers**

1. Risk assessment documentation
2. Care issues and interventions: mobilization, skin care, moisture, positioning, use of devices, nutrition, friction and shear

## **Assessment of Skin Tears**

1. Risk assessment
  - Three group risk assessment tool
  - Payne-Martin classification system
2. Prevention
  - Safe environment
  - Staff/caregiver education
  - Protect from self-injury and skin injury during routine care

## **Management/Treatment of Skin Tears**

1. Assess size of wound
2. Cleaning wounds
3. Application and removal of dressings
4. Use of skin sealants, protective ointments, liquid barriers

## **MAJOR OUTCOMES CONSIDERED**

- Prevalence of new pressure ulcers
- Prevalence of nonhealing pressure ulcers
- Prevalence of skin tears
- Prevalence of nonhealing skin tears

## **METHODOLOGY**

### **METHODS USED TO COLLECT/SELECT EVIDENCE**

Hand-searches of Published Literature (Primary Sources)  
Hand-searches of Published Literature (Secondary Sources)  
Searches of Electronic Databases

### **DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE**

Although the AGREE instrument (which is described in Chapter 1 of the original guideline document) was created to critically appraise clinical practice guidelines, the process and criteria can also be applied to the development and evaluation of clinical practice protocols. Thus the AGREE instrument has been expanded for that purpose to standardize the creation and revision of the geriatric nursing practice guidelines.

### **The Search for Evidence Process**

Locating the best evidence in the published research is dependent on framing a focused, searchable clinical question. The PICO format—an acronym for population, intervention (or occurrence or risk factor), comparison (or control), and outcome—can frame an effective literature search. The editors enlisted the assistance of the New York University Health Sciences librarian to ensure a standardized and efficient approach to collecting evidence on clinical topics. A literature search was conducted to find the best available evidence for each clinical question addressed. The results were rated for level of evidence and sent to the respective chapter author(s) to provide possible substantiation for the nursing practice protocol being developed.

In addition to rating each literature citation to its level of evidence, each citation was given a general classification, coded as "Risks," "Assessment," "Prevention," "Management," "Evaluation/Follow-up," or "Comprehensive." The citations were organized in a searchable database for later retrieval and output to chapter authors. All authors had to review the evidence and decide on its quality and relevance for inclusion in their chapter or protocol. They had the option, of course, to reject or not use the evidence provided as a result of the search or to dispute the applied level of evidence.

### **Developing a Search Strategy**

Development of a search strategy to capture best evidence begins with database selection and translation of search terms into the controlled vocabulary of the database, if possible. In descending order of importance, the three major databases for finding the best primary evidence for most clinical nursing questions are the Cochrane Database of Systematic Reviews, Cumulative Index to Nursing and Allied Health Literature (CINAHL), and Medline or PubMed. In addition, the PsycINFO database was used to ensure capture of relevant evidence in the psychology and behavioral sciences literature for many of the topics. Synthesis sources such as UpToDate® and British Medical Journal (BMJ) Clinical Evidence and abstract journals such as *Evidence Based Nursing* supplemented the initial searches. Searching of other specialty databases may have to be warranted depending on the clinical question.

It bears noting that the database architecture can be exploited to limit the search to articles tagged with the publication type "meta-analysis" in Medline or "systematic review" in CINAHL. Filtering by standard age groups such as "65 and over" is another standard categorical limit for narrowing for relevance. A literature search retrieves the initial citations that begin to provide evidence. Appraisal of the initial literature retrieved may lead the searcher to other cited articles, triggering new ideas for expanding or narrowing the literature search with related descriptors or terms in the article abstract.

### **NUMBER OF SOURCE DOCUMENTS**

Not stated

### **METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE**

Weighting According to a Rating Scheme (Scheme Given)

## **RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE**

### **Levels of Evidence**

**Level I:** Systematic reviews (integrative/meta-analyses/clinical practice guidelines based on systematic reviews)

**Level II:** Single experimental study (randomized controlled trials [RCTs])

**Level III:** Quasi-experimental studies

**Level IV:** Non-experimental studies

**Level V:** Case report/program evaluation/narrative literature reviews

**Level VI:** Opinions of respected authorities/Consensus panels

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## **METHODS USED TO ANALYZE THE EVIDENCE**

Review of Published Meta-Analyses  
Systematic Review

## **DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE**

Not stated

## **METHODS USED TO FORMULATE THE RECOMMENDATIONS**

Expert Consensus

## **DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS**

Not stated

## **RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS**

Not applicable

## **COST ANALYSIS**

The guideline developers reviewed a published cost-analysis.

## **METHOD OF GUIDELINE VALIDATION**

External Peer Review  
Internal Peer Review

## DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Not stated

## RECOMMENDATIONS

### MAJOR RECOMMENDATIONS

**Note from the National Guideline Clearinghouse (NGC):** In this update of the guideline, the process previously used to develop the geriatric nursing protocols has been enhanced.

Levels of evidence (I–VI) are defined at the end of the "Major Recommendations" field.

#### Pressure Ulcers

##### Parameters of Assessment

- Assess for intrinsic and extrinsic risk factors
- Braden Scale risk score
  - 18 or below for elderly and persons with darkly pigmented skin
  - 16 or below for other adults

##### Nursing Care Strategies and Interventions

- Risk assessment documentation
  - On admission to a facility
  - Reassessment intervals whenever the client's condition changes and based on patient care setting:
    - Acute care: every 48 hours
    - Long-term care: weekly for first 4 weeks, then monthly to quarterly
    - Home care: every nursing visit
  - Use a reliable and standardized tool for doing a risk assessment such as the Braden Scale (see "Try This: Predicting Pressure Ulcers" in Resources at [www.ConsultGerRN.org](http://www.ConsultGerRN.org))
  - Document risk assessment scores and implement prevention protocols based on cut score
- General care issues and interventions
  - Culturally sensitive early assessment for stage I pressure ulcers in clients with darkly pigmented skin
    - Use a halogen light to look for skin color changes--may be purple hues
    - Compare skin over bony prominences to surrounding skin--may be boggy or stiff, warm or cooler

- Agency for Health Care Policy and Research (now known as the Agency for Healthcare Research and Quality, AHRQ) (AHCPR, 1992) prevention recommendations:
  - Assess skin daily.
  - Clean skin at time of soiling; avoid hot water and irritating cleaning agents.
  - Use moisturizers on dry skin.
  - Do not massage bony prominences.
  - Protect skin of incontinent clients from exposure to moisture.
  - Use lubricants, protective dressings, and proper lifting techniques to avoid skin injury from friction/shear during transferring and turning of clients.
  - Turn and position bedbound clients every 2 hours if consistent with overall care goals.
  - Use a written schedule for turning and repositioning clients.
  - Use pillows or other devices to keep bony prominences from direct contact with each other.
  - Raise heels of bedbound clients off the bed; do not use donut-type devices (Gilcreast, et al. 2005 **[Level II]**).
  - Use a 30-degree lateral side lying position; do not place client directly on their trochanter.
  - Keep head of the bed at lowest height possible.
  - Use lifting devices (trapeze, bed linen) to move clients rather than dragging them in bed during transfers and position changes.
  - Use pressure-reducing devices (static air, alternating air, gel, water mattresses) (Iglesias et al., 2006 **[Level II]**; Hampton & Collins, 2005 **[Level II]**).
  - Reposition chair or wheelchair bound clients every hour. In addition, if client is capable, have them do small weight shifts every 15 minutes.
  - Use a pressure-reducing device (not a donut) for chair-bound clients.
- Other care issues and interventions
  - Keep the patient as active as possible; encourage mobilization.
  - Do not massage reddened bony prominences.
  - Avoid positioning the patient directly on their trochanter.
  - Avoid use of donut-shaped devices.
  - Avoid drying out the patient's skin; use lotion after bathing.
  - Avoid hot water and soaps that are drying when bathing elderly. Use body wash and skin protectant (Hunter et al., 2003 **[Level III]**).
  - Teach patient, caregivers, and staff the prevention protocols.
  - Manage moisture:
    - Manage moisture by determining the cause; use absorbent pad that wicks moisture.
    - Offer a bedpan or urinal in conjunction with turning schedules.
  - Manage nutrition:
    - Consult a dietician and correct nutritional deficiencies
    - Increase protein and calorie intake and A, C, or E vitamin supplements as needed (Houwing et al., 2003

**[Level II]**; Centers for Medicare and Medicaid Services [CMS], 2004 **[Level V]**).

- Offer a glass of water with turning schedules to keep patient hydrated.
- Manage friction and shear:
  - Elevate the head of the bed no more than 30 degrees.
  - Have the patient use a trapeze to lift self up in bed.
  - Staff should use a lift sheet or mechanical lifting device to move patient.
  - Protect high-risk areas such as elbows, heels, sacrum, back of head from friction injury.
- Interventions linked to Braden risk scores (Adapted from Ayello & Braden, 2001)

Prevention protocols linked to Braden risk scores are as follows:

- At-risk: score of 15 to 18
  - Frequent turning; consider every 2 hour schedule; use a written schedule.
  - Maximize patient's mobility.
  - Protect patient's heels.
  - Use a pressure-reducing support surface if patient is bed- or chair-bound.
- Moderate risk: score of 13 to 14
  - Same as above but provide foam wedges for 30-degree lateral position.
- High risk: score of 10 to 12
  - Same as above, but add the following:
    - Increase the turning frequency.
    - Do small shifts of position.
- Very high risk: score of 9 or below
  - Same as above, but use a pressure relieving surface.
  - Manage moisture, nutrition, and friction/shear.

### **Follow-up Monitoring of Condition**

- Monitor effectiveness of prevention interventions.
- Monitor healing of any existing pressure ulcers.

### **Skin Tears**

#### **Parameters of Assessment**

- Use the three-group risk assessment tool (White, Karam & Cowell, 1994 **[Level IV]**) to assess for skin tear risk.
- Use the Payne and Martin (1993 **[Level IV]**) classification system to assess clients for skin tear risk:
  - Category I: a skin tear without tissue loss
  - Category II: a skin tear with partial tissue loss
  - Category III: a skin tear with complete tissue loss, where the epidermal flap is absent

## **Nursing Care Strategies and Interventions (Baranoski, 2000 [Level V])**

- Preventing skin tears
  - Provide a safe environment:
    - Do a risk assessment of elderly patients on admission.
    - Implement prevention protocol for patients identified as at risk for skin tears.
    - Have patients wear long sleeves or pants to protect their extremities (Bank, 2005 [Level IV]).
    - Have adequate light to reduce the risk of bumping into furniture or equipment.
    - Provide a safe area for wandering.
  - Educate staff or family caregivers in the correct way of handling patients to prevent skin tears. Maintain nutrition and hydration:
    - Offer fluids between meals.
    - Use lotion, especially on dry skin on arms and legs, twice daily (Hanson et al., 2005 [Level III]).
    - Obtain a dietary consult.
  - Protect from self-injury or injury during routine care:
    - Use a lift sheet to move and turn patients.
    - Use transfer techniques that prevent friction or shear.
    - Pad bedrails, wheelchair arms, and leg supports (Bank, 2005 [Level IV]).
    - Support dangling arms and legs with pillows or blankets.
    - Use non-adherent dressings on frail skin.
      - Apply petroleum-based ointment, steri-strips, or a moist nonadherent wound dressing such as hydrogel dressing with gauze as a secondary dressing. Telfa type dressings are also used.
      - If you must use tape, be sure it is made of paper, and remove it gently. Also, you can apply the tape to hydrocolloid strips placed strategically around the wound rather than taping directly onto fragile surrounding skin around the skin tear.
    - Use gauze wraps, stockinettes, flexible netting, or other wraps to secure dressings rather than tape.
    - Use no-rinse soapless bathing products (Birch & Coggins, 2003 [Level IV]; Mason, 1997 [Level IV]).
    - Keep skin from becoming dry, apply moisturizer (Hanson et al., 2005 [Level III]; Bank, 2005 [Level IV]).
- Treating skin tears (Baranoski & Ayello, 2004 [Level V])
  - Gently clean the skin tear with normal saline.
  - Let the area air dry or pat dry carefully.
  - Approximate the skin tear flap.
  - Use caution if using film dressings as skin damage can occur when removing dressings.
  - Consider putting an arrow to indicate the direction of the skin tear on the dressing to minimize any further skin injury during dressing removal.
    - Skin sealants, petroleum-based products, and other water-resistant product such as protective barrier ointments or liquid barriers may be used to protect the surrounding skin from wound drainage or dressing/tape removal trauma.

- Always assess the size of the skin tear, consider doing a wound tracing.
- Document assessment and treatment findings.

### **Follow-up Monitoring of Condition**

Continue to reassess for any new skin tears in older adults.

### **Definitions:**

**Level I:** Systematic reviews (integrative/meta-analyses/clinical practice guidelines based on systematic reviews)

**Level II:** Single experimental study (randomized controlled trials [RCTs])

**Level III:** Quasi-experimental studies

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### **CLINICAL ALGORITHM(S)**

None provided

## **EVIDENCE SUPPORTING THE RECOMMENDATIONS**

### **REFERENCES SUPPORTING THE RECOMMENDATIONS**

[References open in a new window](#)

### **TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS**

The type of supporting evidence is identified and graded for selected recommendations.

## **BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS**

### **POTENTIAL BENEFITS**

**Pressure Ulcers**

**Patient**

- Skin will remain intact.
- Pressure ulcer(s) will heal.

#### **Provider/Nurse**

- Accurate performance of pressure ulcer risk assessment using standardized tool
- Implementation of pressure ulcer prevention protocols for clients interpreted as at risk for pressure ulcers
- Performance of a skin assessment for early detection of pressure ulcers

#### **Institution**

- Reduction in development of new pressure ulcers
- Increased number of risk assessments performed
- Cost-effective prevention protocols developed

#### **Skin Tears**

- Absence of skin tears in at-risk clients
- Skin tears that do occur will heal

#### **POTENTIAL HARMS**

Not stated

### **IMPLEMENTATION OF THE GUIDELINE**

#### **DESCRIPTION OF IMPLEMENTATION STRATEGY**

An implementation strategy was not provided.

#### **IMPLEMENTATION TOOLS**

Resources  
Staff Training/Competency Material

For information about [availability](#), see the "Availability of Companion Documents" and "Patient Resources" fields below.

### **INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES**

#### **IOM CARE NEED**

Getting Better  
Staying Healthy

#### **IOM DOMAIN**

Effectiveness  
Safety

## IDENTIFYING INFORMATION AND AVAILABILITY

### BIBLIOGRAPHIC SOURCE(S)

Ayello EA, Sibbald RG. Preventing pressure ulcers and skin tears. In: Capezuti E, Zwicker D, Mezey M, Fulmer T, editor(s). Evidence-based geriatric nursing protocols for best practice. 3rd ed. New York (NY): Springer Publishing Company; 2008 Jan. p. 403-29. [91 references]

### ADAPTATION

Not applicable: The guideline was not adapted from another source.

### DATE RELEASED

2003 (revised 2008 Jan)

### GUIDELINE DEVELOPER(S)

Hartford Institute for Geriatric Nursing - Academic Institution

### GUIDELINE DEVELOPER COMMENT

The guidelines were developed by a group of nursing experts from across the country as part of the Nurses Improving Care for Health System Elders (NICHE) project, under sponsorship of The John A. Hartford Foundation Institute for Geriatric Nursing.

### SOURCE(S) OF FUNDING

Supported by a grant from the John A. Hartford Foundation.

### GUIDELINE COMMITTEE

Not stated

### COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

*Primary Author:* Elizabeth A. Ayello and R. Gary Sibbald

### FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

### GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: Ayello EA. Preventing pressure ulcers and skin tears. In: Mezey M, Fulmer T, Abraham I, Zwicker DA, editor(s). *Geriatric nursing protocols for best practice*. 2nd ed. New York (NY): Springer Publishing Company, Inc.; 2003. p. 165-84.

## **GUIDELINE AVAILABILITY**

Electronic copies: Available from the [Hartford Institute for Geriatric Nursing Web site](#).

Copies of the book *Geriatric Nursing Protocols for Best Practice*, 3rd edition: Available from Springer Publishing Company, 536 Broadway, New York, NY 10012; Phone: (212) 431-4370; Fax: (212) 941-7842; Web: [www.springerpub.com](http://www.springerpub.com).

## **AVAILABILITY OF COMPANION DOCUMENTS**

The followings are available:

- Predicting pressure ulcer risk. Try this: best practices in nursing care to older adults. 2007. Electronic copies available from the [Hartford Institute for Geriatric Nursing Web site](#).
- Nursing care strategies/treatment/management and pressure ulcer staging system are available from the [Hartford Institute for Geriatric Nursing Web site](#).
- Pressure ulcers/skin tears: post-test instructions are available from the Continuing education activity. Available from the [Hartford Institute for Geriatric Nursing Web site](#).

## **PATIENT RESOURCES**

None available

## **NGC STATUS**

This summary was completed by ECRI on May 30, 2003. The information was verified by the guideline developer on August 25, 2003. This summary was updated on June 19, 2008. The updated information was verified by the guideline developer on August 4, 2008.

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